CLAIMS

1. An optoelectronic subassembly for optoelectronic modules comprising:

a supporting substrate having a mounting surface and an opposed surface;

an optoelectronic device mounted on the mounting surface; and

at least three offset arms each including a substrate-mounting portion, a supporting-structure-mounting portion and a linking portion, the substrate-mounting portion and the supporting-structure-mounting portion including substantially parallel surfaces with the linking portion extending at an angle therebetween, and at least the linking portion including deformable material for allowing small changes in the angle, one of the parallel surfaces of each of the at least three offset arms being mounted on one of the mounting surface of the supporting substrate and the opposed surface.

2. An optoelectronic subassembly for optoelectronic modules as claimed in claim 1 wherein the at least three offset arms include electrically conductive material.

3. An optoelectronic subassembly for optoelectronic modules as claimed in claim 2 wherein the optoelectronic device includes electrical connections and some of the at least three offset arms are coupled, one each, to the electrical connections.

4. An optoelectronic subassembly for optoelectronic modules as claimed in claim 3 further including a supporting structure including a mounting surface and another of the parallel surfaces of each of the at least three offset arms being mounted on the mounting surface of the supporting structure.

5. An optoelectronic subassembly for optoelectronic modules as claimed in claim 4 wherein at least some of the parallel surfaces of each of the at least three offset arms mounted on the mounting surface of the supporting structure are coupled to I/O pads on the mounting surface of supporting structure.

6. An optoelectronic subassembly for optoelectronic modules as claimed in claim 4 wherein the supporting structure

includes a trench and the at least three offset arms mount the supporting substrate suspended in the trench.

7. An optoelectronic subassembly for optoelectronic modules comprising:

a supporting substrate having a mounting surface and an opposed surface;

an optoelectronic device mounted on the mounting surface;

a supporting structure including a mounting surface; and

at least three offset arms each including a substrate-mounting portion, a supporting-structure-mounting portion and a linking portion, the substrate-mounting portion and the supporting-structure-mounting portion including substantially parallel surfaces with the linking portion extending at an angle therebetween, and at least the linking portion including deformable material for allowing small changes in the angle, one of the parallel surfaces of each of the at least three offset arms being mounted on one of the mounting surface of the supporting substrate and the opposed surface and the other of the parallel surfaces of each of the at least three offset arms being mounted on the mounting surface of the support structure.

8. An optoelectronic subassembly for optoelectronic modules as claimed in claim 7 wherein the at least three offset arms include electrically conductive material.

9. An optoelectronic subassembly for optoelectronic modules as claimed in claim 8 wherein the optoelectronic device includes electrical connections and some of the at least three offset arms are coupled, one each, to the electrical connections.

10. An optoelectronic subassembly for optoelectronic modules as claimed in claim 9 wherein at least some of the parallel surfaces of each of the at least three offset arms mounted on the mounting surface of the supporting structure are coupled to I/O pads on the mounting surface of supporting structure.

11. A method of mounting and aligning an optoelectronic subassembly for optoelectronic modules on a supporting structure comprising the steps of:

providing a supporting substrate having a mounting surface and an opposed surface, an optoelectronic device mounted on the mounting surface, and at least three offset arms each including a substrate-mounting portion, a supporting-structure-mounting portion and a linking portion, the substrate-mounting portion and the supporting-structure-mounting portion including substantially parallel surfaces with the linking portion extending at an angle therebetween, and at least the linking portion including deformable material for allowing small changes in the angle, one of the parallel surfaces of each of the at least three offset arms being mounted on one of the mounting surface of the supporting substrate and the opposed surface;

providing a supporting structure having a mounting surface and an optical lens assembly;

mounting the other of the parallel surfaces of each of the at least three offset arms on the mounting surface of the support structure with the optoelectronic device roughly in optical alignment with the optical lens assembly and the supporting substrate spaced from the supporting structure; and

deforming the linking portion of the at least three offset arms to move the optoelectronic device into optical alignment with the optical lens assembly.

12. A method as set forth in claim 11 including a step of forming a trench in the supporting structure and suspending the supporting substrate in the trench with the at least three offset arms.

13. A method as claimed in claim 11 wherein the optoelectronic device includes electrical connections and the supporting structure includes I/O pads on the mounting surface, the step of mounting includes electrically connecting the electrical connections to the I/O pads through the at least three offset arms.

14. A method of mounting and aligning an optoelectronic subassembly for optoelectronic modules on a supporting structure comprising the steps of:

providing a supporting substrate having a mounting surface and an opposed surface, an optoelectronic device mounted on the mounting surface;

providing a supporting structure having a mounting surface and an optical lens assembly mounted on the mounting surface;

placing a layer of adhesive in a semi-liquid state on the mounting surface proximate the optical lens assembly;

placing the opposite surface of the supporting substrate on the layer of adhesive;

applying a force to the supporting substrate to optically align the optoelectronic device with the optical lens assembly; and

allowing the adhesive to cure with the optoelectronic device and the optical lens assembly optically aligned.

15. A method as claimed in claim 14 wherein the step of placing the layer of adhesive includes placing a layer of

adhesive sufficiently thick to place the optoelectronic device vertically above alignment with the optical lens assembly and the step of applying a force includes pushing the supporting substrate vertically downward until the optoelectronic device and the optical lens assembly are optically aligned.

16. A method as claimed in claim 14 wherein the step of applying a force includes using a D/A tip with arms.